

What is claimed is:

1. A wireless communication device driven by an internal power supply, comprising: disturbance component extracting means for extracting from a signal received by a receiving antenna a disturbance component which may affect the device's wireless communication signal; disturbance wave periodicity detecting means for detecting the radiation period by comparing the disturbance component extracted by said disturbance component extracting means with a frequency-divided signal obtained at a gradually varying frequency dividing ratio with respect to a clock signal of a predetermined frequency; and communication control means for performing the exchange of a communication packet during a radiation-free period of time within the radiation period detected by said disturbance wave periodicity detecting means.

2. The wireless communication device according to claim 1, wherein said disturbance wave periodicity detecting means comprises a frequency dividing circuit for gradually increasing a frequency dividing ratio with respect to an input clock signal of a predetermined frequency and a period determination circuit for determining the period of a disturbance wave by comparing a signal received by a receiving antenna with a frequency-divided signal from said frequency dividing circuit.

3. The wireless communication device according to claim 1 or 2, wherein said communication control means comprises communication connection continuing means for shifting the

transmission frequency of a control signal to keep the communication connection established into a preset disturbance-free frequency band to continue the communication connection when the radiation period of a disturbance wave is detected by said disturbance wave periodicity detecting means.

4. The wireless communication device according to claim 1, wherein said communication control means comprises transmission means for notifying of the presence and period of a disturbance wave any communication partner which cannot detect the presence of the disturbance wave when the radiation period of a disturbance wave is detected by said disturbance wave periodicity detecting means.

5. The wireless communication device according to claim 1, comprising power control means for controlling the power depending on the radiation period of the disturbance wave detected by said disturbance wave periodicity detecting means.

6. The wireless communication device according to claim 5, wherein said power control means is configured to determine whether a communication packet can be transmitted when the radiation period of a disturbance wave is detected by said disturbance wave periodicity detecting means, and to discontinue the power control when the communication packet cannot be transmitted.

7. The wireless communication device according to claim 2, wherein said communication control means comprises transmission means for notifying of the presence and period

of a disturbance wave any communication partner which cannot detect the presence of the disturbance wave when the radiation period of a disturbance wave is detected by said disturbance wave periodicity detecting means.

5           8. The wireless communication device according to claim 3, wherein said communication control means comprises transmission means for notifying of the presence and period of a disturbance wave any communication partner which cannot  
10       period of a disturbance wave is detected by said disturbance wave periodicity detecting means.

          9. The wireless communication device according to claim 2, comprising power control means for controlling the power depending on the radiation period of the disturbance wave  
15       detected by said disturbance wave periodicity detecting means.

          10. The wireless communication device according to claim 3, comprising power control means for controlling the power depending on the radiation period of the disturbance wave detected by said disturbance wave periodicity detecting  
20       means.

          11. The wireless communication device according to claim 4, comprising power control means for controlling the power depending on the radiation period of the disturbance wave detected by said disturbance wave periodicity detecting  
25       means.